

CLAIMS

1 1. (currently amended) An actuator, comprising:
2 a first electret layer having an electrical charge, said first electret layer embedded in a
3 light guidance substrate;
4 a first conductive layer residing on said first electret layer light guidance substrate;
5 a moveable second electret layer, wherein said second electret layer is embedded in a
6 deformable dielectric layer in a spaced apart relation to said first conductive layer in a
7 quiescent state;
8 a second conductive layer disposed on said deformable dielectric layer in a spaced
9 apart relation to said second electret layer in said quiescent state; and
10 a voltage source configured to selectively apply a voltage between said first and said
11 second conductive layers layer.

1 2. (currently amended) The actuator as recited in claim 1, wherein said voltage applied
2 between said first and said second conductive layer results in propelling said second electret
3 layer to one of said first and said second conductive layers.

1 3. (original) The actuator as recited in claim 1, wherein said second electret layer has an
2 electric charge of a same polarity as said electric charge of said first electret layer, wherein
3 said second electret layer is operable for propelling toward said first electret layer in response
4 to said voltage source applying a charge having an opposite polarity of said polarity of said
5 charge of said first electret layer to said first conductive layer.

1 4. (original) The actuator as recited in claim 1, wherein said second electret layer has an
2 electric charge of a same polarity as said electric charge of said first electret layer, wherein
3 said second electret layer is operable for propelling toward said second conductive layer in
4 response to said voltage source applying a charge having an opposite polarity of said polarity
5 of said charge of said first electret layer to said second conductive layer.

5. (original) The actuator as recited in claim 1, wherein upon equalizing a potential difference between said first and said second conductive layers said second electret returns to its quiescent state.

6. (original) The actuator as recited in claim 1, wherein said first and said second electret layers comprise mono-charged electrets.

7. (original) The actuator as recited in claim 1, wherein said first and said second electret layers comprise polarized electrets.

8. (original) The actuator as recited in claim 1, wherein said first electret layer comprises polarized electrets.

9. (original) The actuator as recited in claim 1, wherein said second electret layer comprises polarized electrets.

10. (currently amended) The actuator as recited in claim 1, wherein said second electret layer and said deformable dielectric layer undergo ~~undergoes~~ deformation as a result of said voltage source selectively applying said voltage between said first and said second conductive layers.

11. (currently amended) The actuator as recited in claim 10, wherein said second electret layer and said deformable dielectric layer are is restored to an undeformed state upon equalizing a potential difference between said first and said second conductive layers.

12. (currently amended) ~~The actuator as recited in claim 1;~~ An actuator, comprising:
a first electret layer having an electrical charge;
a first conductive layer residing on said first electret layer;
a moveable second electret layer, wherein said second electret layer is in a spaced apart relation to said first conductive layer in a quiescent state;
a second conductive layer in a spaced apart relation to said second electret layer in said quiescent state; and

8 a voltage source configured to selectively apply a voltage between said first and said
9 second conductive layers, wherein frustration of total internal reflection of light occurs by
10 means of said second electret layer.

1 13. (original) The actuator as recited in claim 12, wherein a low refractive index gap
2 between dielectric materials associated with said first and said second electret layers
3 alternates between distances larger and smaller than one wavelength of light as a function of
4 a potential difference selectively applied between said first and said second conductive layers
5 thereby providing means to frustrate said total internal reflection of light and allow light to
6 leap said gap into said second electret layer.

1 14. (currently amended) The actuator, comprising:
2 a first electret layer having an electric charge;
3 a first conductive layer;
4 a moveable second electret layer, wherein said moveable second electret layer is in a
5 spaced apart relation to said first conductive layer in a quiescent state, wherein said first
6 conductive layer is positioned between said first electret layer and said moveable second
7 electret layer;
8 a second conductive layer in a spaced apart relation to said electret layer in said
9 quiescent state, said moveable second electret layer positioned between said first conductive
10 layer and said second conductive layer; and
11 a voltage source configured to selectively apply a voltage between said first and said
12 second conductive layers layer.

1 15. (currently amended) The actuator as recited in claim 14, wherein said voltage applied
2 between said first and said second conductive layers results in propelling said moveable
3 second electret layer to one of said first and said second conductive layers

1 16. (currently amended) The actuator as recited in claim 14, wherein said moveable
2 second electret layer is operable for propelling toward said first conductive layer in response
3 to said voltage source applying a charge having an opposite polarity of a polarity of a charge
4 of said moveable second electret layer to said first conductive layer.

1 17. (currently amended) The actuator as recited in claim 14, wherein said moveable
2 second electret layer is operable for propelling toward said second conductive layer in
3 response to said voltage source applying a charge having an opposite polarity of a polarity of
4 a charge of said moveable second electret layer to said second conductive layer.

1 18. (currently amended) The actuator as recited in claim 14, wherein upon equalizing a
2 potential difference between said first and said second conductive layers said moveable
3 second electret layer returns to its quiescent state.

1 19. (currently amended) The actuator as recited in claim 14, wherein said moveable
2 second electret layer comprises mono-charged electrets.

1 20. (currently amended) The actuator as recited in claim 14, wherein said moveable
2 second electret layer undergoes deformation as a result of said voltage source selectively
3 applying said voltage between said first and said second conductive layers.

1 21. (currently amended) The actuator as recited in claim 20, wherein said moveable
2 second electret layer is restored to an undeformed state upon equalizing a potential difference
3 between said first and said second conductive layers.

1 22. (currently amended) The actuator as recited in claim 14, wherein frustration of total
2 internal reflection of light occurs by means of said moveable second electret layer.

1 23. (currently amended) The actuator as recited in claim 22, wherein a low refractive
2 index gap between dielectric materials associated with said first conductive layer and said
3 moveable second electret layer alternates between distances larger and smaller than one
4 wavelength of light as a function of a potential difference selectively applied between said
5 first and said second conductive layers thereby providing means to frustrate said total internal
6 reflection of light and allow light to leap said gap into said moveable second electret layer.